

This issue of the Diabetes Quality Care Monitoring System – Quality Improvement Report (DQCMS-QIR) highlights information about diabetes prevalence in the United States and a successful strategy for improving dilated eye exam results.

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## Prevalence of Diabetes and Impaired Fasting Glucose in Adults in the United States

The National Health and Nutrition Examination Survey (NHANES), which was designed to monitor the health of the adult US population periodically is now being conducted continuously; however, the data is only released every two years. The survey includes a blood sugar determination as well as a physical examination and an extensive interview. In June of 2006, the latest trends in the prevalence of diabetes, undiagnosed diabetes and impaired fasting glucose (IFG) were published for the years 1999-2002.<sup>1</sup> The new data shows an interesting trend in the prevalence of diagnosed diabetes, undiagnosed diabetes and IFG when compared to previous years.

### Prevalence of diagnosed diabetes

The crude prevalence of diagnosed diabetes in 1999 to 2002 was 6.5%, an increase from the 5.1 % rate in the US in the years 1988 to 1994. Rates of diabetes were similar for men and women but varied by ethnicity. The age-standardized rates for whites, Mexican Americans, and blacks were 5.2%, 10.4% and 11% respectively.

### Prevalence of undiagnosed diabetes

It was estimated that 2.8% of the total US population had undiagnosed diabetes based on one fasting glucose value above 126 mg/dL and no known history of diabetes. Approximately one third (30.1%) of the total number of persons with diabetes were undiagnosed, although the percentage of total diabetes that was undiagnosed decreased from 34.6% in the years 1988 to 1994. The apparent decrease in the percentage of undiagnosed diabetes was the result of the increase in diagnosed diabetes. Standardized estimates of undiagnosed diabetes did not show any differences. But men were more likely to have undiagnosed diabetes when compared to women. (3.6% vs 2.1%, p=0.02).

### Prevalence of IFG

IFG, defined as a plasma glucose value > 100 mg/dL and < 126 mg/dL, is associated with an increased risk for diabetes and cardiovascular disease.<sup>2</sup> Over one fourth of the US population (26%) of adults had IFG, and the rates were unchanged between the two time periods. Among those aged 65 years or older, 39.1% had IFG. The standardized rate of IFG among blacks was lower (17.7%) than among whites (26.1%) and Mexican Americans (31.6%). Men were more likely to have IFG than women (32.8% vs 19.5%) in the total population.

Diabetes (diagnosed and undiagnosed) in persons aged 20 years and older in the US affects 9.3% of the population – an estimated 19.3 million people based on the 2002 census. Approximately one-third of the total numbers are likely undiagnosed. In addition, another 26% have IFG and are at high risk for diabetes. Interestingly, although the prevalence of diagnosed diabetes increased between the two time periods, rates of undiagnosed diabetes and IFG were stable. Thus, careful screening for diabetes as recommended will continue to identify substantial numbers of cases of diabetes who need treatment along with individuals with IFG for whom efforts to prevent diabetes and reduce cardiovascular risk factors can be initiated. The data also suggest men should be considered for screening.

1. Cowie, CC, Rust KF, Byrd-Holt DD, Eberhardt MS, Flegal KM, Engelgau MM, Saydah SH, Williams DE, Geiss LS, Gregg EW. *Prevalence of diabetes and impaired fasting glucose in adults in the United States; National Health and Nutrition Examination Survey 1999-2002*. Diabetes Care 2006;29:1263-1268.

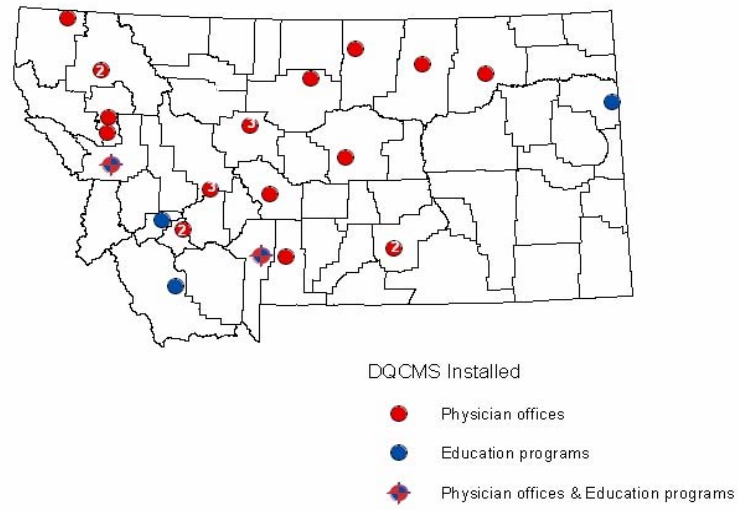
2. American Diabetes Association. *Diagnosis and classification of diabetes mellitus*. Diabetes Care 2004;27(suppl 1):S5-S10.



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**FIGURE 1: PHYSICIAN OFFICES PARTICIPATING IN THE DIABETES QUALITY CARE MONITORING SYSTEM (DQCMS) PROJECT, October 2005 (n=29)**

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**FIGURE 2:**

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# A Successful Strategy to Increase Documentation of Diabetic Eye Exams in Primary Care Settings

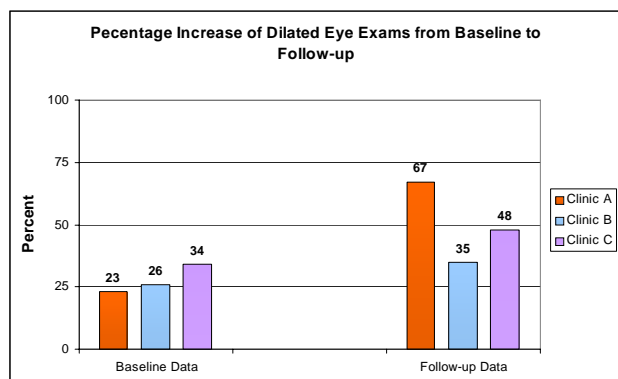
**Background:** Diabetic retinopathy is the leading cause of legal blindness among adults aged 20 to 74 years in the United States.<sup>1</sup> Forty to forty-five percent of Americans diagnosed with diabetes have some state of diabetic retinopathy.<sup>2</sup> Early detection and treatment can reduce development of severe vision loss by an estimated 50% to 60%.<sup>3</sup>

**Objective:** To increase documentation of dilated eye exams by using an adapted feedback form in primary care practices.

**Methods:** One Helena primary care physician developed a simple form that patients could take to their dilated eye exam. The completed form can be faxed back with results in a simplified format. Other primary care practices, in difference communities, adapted the same template. The practices used a simple registry system and provided quarterly, aggregate data to the Montana Diabetes Project.

**Results:** Three clinics using the form increased their documented dilated eye exam rates from baseline to follow-up. Clinic A increased from 23% (February) to 67%\*(January), Clinic B increased from 26% (August) to 35%\* (January) and Clinic C increased from 34% (July) to 48% (January).

**Conclusions:** Using a personalized form from primary care practices can impact documented dilated eye exams. Use of a simple registry can assist busy clinicians in managing their patients with diabetes.




\* Indicates a statistically significant increase in documented dilated eye exams

## Reference

1. American Diabetes Association
2. National Eye Institute
3. National Diabetes Fact Sheet CDC

[SPECIAL THANKS to Dr. Jay Larson, Dr. Jeannie Brandt and Marcia Ward RN for sharing their successful QI work!]

  
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Dear Eye Care Professional,

In our effort to provide the highest quality care to our patients with diabetes, it would be beneficial to have the results of their recent dilated eye exam. Please fill out the below information upon completion of the dilated eye exam and fax it back to <<insert clinic name>> at <<insert fax number>>. Thank you.

Patient name: \_\_\_\_\_

Date of birth: \_\_\_\_\_ Date of eye exam: \_\_\_\_\_

Findings (please check appropriate box):

Right eye

- ☐ No retinopathy
- ☐ Non-proliferative diabetic retinopathy
- ☐ Pre-proliferative diabetic retinopathy
- ☐ Proliferative diabetic retinopathy
- ☐ Other: \_\_\_\_\_

Left eye

- ☐ No retinopathy
- ☐ Non-proliferative diabetic retinopathy
- ☐ Pre-proliferative diabetic retinopathy
- ☐ Proliferative diabetic retinopathy
- ☐ Other: \_\_\_\_\_

Comment: \_\_\_\_\_

Signed: \_\_\_\_\_



## **A Red Carpet Welcome to our New DQCMS Partner**

**-Marias Healthcare - Shelby**

# **SAVE THE DATE**

**WHAT: Diabetes Professional Conference**  
**WHEN: October 19 & 20, 2006**  
**WHERE: Grouse Mountain Lodge**  
**Whitefish, MT**  
**KEYNOTE SPEAKER: Aaron Vinick, MD**

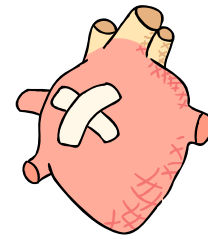
(Call Susan Day at 406-444-6677 for more information)



The Cardiovascular Health Program is coordinating a region wide cardiac rehab outcomes/QI project. Thirty rehab programs from Montana and Northern Wyoming are participating. Indicators of particular interest related to patients with diabetes include:

- Percent of patients with blood pressure in control (<130/80)
- If an A1c has been measured within the last 6 months

Data collection for this project began July 3<sup>rd</sup>. The first quarter's data will be reported in January 2007.



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